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J.P. De Greve R. Blomme H. Hensberge (Eds.)

Stellar Atmospheres: Theory and Observations

Lectures Held at the
Astrophysics School IX
Organized by the European Astrophysics Doctoral Network
(EADN) in Brussels, Belgium, 10–19 September 1996

Springer

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Preface

Advance in science builds upon the continuous exchange of ideas, and the confrontation of theory and experiment or observation. Both should be executed by researchers with a vast knowledge of the physics and mathematics involved.

The Summer Schools of the European Astrophysical Doctoral Network aim at contributing to this in providing doctoral students in astrophysics with opportunities to enrich their knowledge in particular fields in a truly international setting. Young scientists from all over Europe (and abroad!) gather for two weeks, study and work together, and enjoy the multicultural atmosphere. Future collaboration across the border may find its roots in the lively atmospheres of the Schools.

The 1996 School dealt with the atmospheres of stars, the various theories that describe their structure and the interactions with the interior of the stars as well as with the interstellar environment, and the observations that support, modify and sometimes contradict these theories.

The School aimed at 4 goals:

- To offer an insight into problems related to stellar atmospheres for both cool and hot stars, at a high-quality level.
- To offer opportunities to deal with modern technologies in analysing observational data versus theoretical modelling.
- To learn to appreciate teamwork.
- To work and live in an international, multicultural environment.

Forty-three students attended the 1996 School, 11 females and 32 males. They came from 15 different countries. Three participants came from outside the European Union. Although a majority had a research interest in the topic of the School, Ph.D. students in all possible subdisciplines attended, their interest ranging from cosmology, over galactic structure, stellar evolution to helioseismology.

Each morning, two of the eight lecturers presented their views on one of the topics in the field. This volume contains all the lectures presented at the School. In the afternoon, practical (computer) projects with observational data were organized at the Royal Observatory of Belgium. The content of these projects was designed by the lecturers. The students learnt to work with different astrophysical data analysis packages. To ensure multicultural cooperation the participants were thoroughly mixed in the project teams. The following projects were offered to the students: the infrared continuum and excess of hot stars (Lamers & Bjorkman), the Sobolev method with exact integration for P Cygni profiles (Fullerton), analysis of ROSAT data (Schmitt), spectrum synthesis (Hubeny). Each team of students had to choose two projects.

A cheese and wine evening, offered by the university, was organized for students and participants. The students themselves organized a dining-out evening (with a little help from the local organization), attended by practically all students and lecturers. Coffee breaks and common lunches added to familiarize us with one another.

Important parts of the program were the Show and Tell parts, which took up almost 5 hours. Students presented their own research topic and their interest in it in 5-minutes talks (with one or two transparencies), followed by a few questions.

The organization of the School is impossible without the financial help of various bodies. We take the opportunity to thank the European Commission that financed the larger part of the School, more specifically through the ERASMUS and the Human Capital and Mobility Programmes. We also thank the authorities of the Vrije Universiteit Brussel and the Royal Observatory of Belgium for their hospitality, services and financial support. The university provided favourable conditions for housing and meals. We also appreciated very much the financial support from the Swedish government and from the Fund for Scientific Research of Flanders (F.W.O.).

One of us (J.P.D.G.) heartedly thanks Vincent Icke, the organizer of the previous School in Leiden, for the valuable preliminary information on the organization. It helped me getting things on the move much easier. And the T-shirt still fits me well, Icke. Special thanks go to Tom Ray, secretary of the EADN, whose extensive advice and support definitely helped me through some tough moments, and to Koen Vyverman, whose organizational talent contributed much to the smooth and pleasant running of the School.

The enthusiasm of both lecturers and students, and the many lively discussions, made this School a truly European experience.

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Brussels, August 1997

Jean-Pierre De Greve

Ronny Blomme
Herman Hensberge

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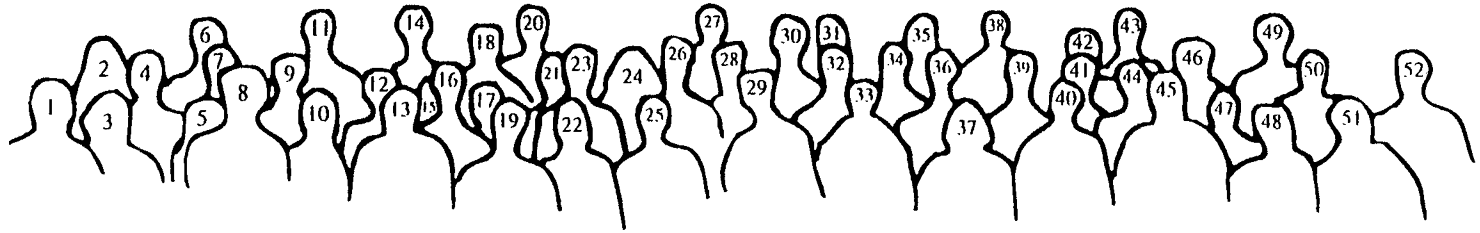

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